DOCUMENT RESUME

ED 169 015 SP 014 010

AUTHOR	Pine, Gerald J.
TITLE	Teacher Adaptation of Research Findings Through Inservice Education.
INSTITUTION	Portsmouth Public Schools, N.H.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Teacher Corps.
PUB DATE	79
NOTE	28p.
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Action Research; *Change Agents; *Educational Innovation; *Educational Research; *Inservice Teacher Education; Instructional Materials; Research Utilization; Staff Improvement; *Teaching Methods; Validated Programs
IDENTIFIERS	*Teacher Corps Project

ABSTRACT

A program designed to adapt educational research findings to practical classroom use is described. A variety of options for adapting research through inservice education are described. They include formal university courses after school, released time programs, one to one and small group consultations, independent study, graduate research theses, visitations, professional conferences, team planning meetings, and support for teacher action research and pilot program proposals. Proposals for action research and pilot programs are supported by the project for materials, consultative services, and publication and dissemination. The program is designed to accommodate different styles and paces of teachers. (JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED169015

APR 4 10 40 AM '79

TEACHER CORPS

UNIVERSITY OF NEW HAMPSHIRE & PORTSMOUTH JUNIOR HIGH SCHOOL

TEACHER CORPS PROJECT

Cycle XII

2

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

SP 014 010

by

Gerald J. Pine
Professor of Education
and
Director
University of New Hampshire-Portsmouth Teacher Corps Project
Morrill Hall
University of New Hampshire
Durham, New Hampshire 03824

TEACHER ADAPTATION OF RESEARCH FINDINGS THROUGH INSERVICE EDUCATION

TEACHER ADAPTATION OF RESEARCH FINDINGS THROUGH INSERVICE EDUCATION

Gerald J. Pine

Universities, Teacher Corps, NIE, regional research centers, and local education agencies have generated research findings which have direct implications for practice in terms of the development of classroom materials, complete instructional systems, strategies for teacher and administrator training, implementation processes, and procedures for evaluation. The demonstrated adaptation of these findings can address significant educational problems. But research findings which sit unused on shelves are a far cry from improved educational practice. Unless local school systems see R & D innovations as responsive to some need and support them accordingly, then research validated models and processes will have little chance of survival and less chance of impact.

Rapid social change with concurrent changes in demands on teachers, wide variations within instructional settings, and a growing awareness that to improve teachers' impact on pupil learning there must be changes in teacher performance - all of these elements accentuate the importance of implementing an on-going, individualized approach to teacher education. Both preservice and inservice teachers need a continuing means of acquiring the skills that they individually need to fulfill their instructional roles. Research validated models, processes, and protocol materials offer a high potential approach to vitalizing preservice and inservice teacher education. They provide creative means for melding theory and practice into effective learning-means which reflect conceptual underpinning and technical know how. Field based experimentation is needed to determine the unique place of re-

search findings in teacher education and to assess the effectiveness of using such data in facilitating organizational, curriculum, and behavioral change.

The Research Adaptation Cluster is a Teacher Corps subsystem consisting of projects whose primary mission is to adapt validated research findings as a demonstration strategy for training and retraining teachers. The University of New Hampshire-Portsmouth Teacher Corps Project is one of the participating projects in the Research Cluster. Our project is designed to test the hypothesis that educational change can be accomplished through the demonstrated application of research validated models and practices. Research findings for adaptation at Portsmouth Junior High School, Portsmouth, New Hampshire, have been and are being identified through an extensive and comprehensive needs assessment process. Research adaptation in isolation is doomed to failure, and we assume that the identification of specific research findings for adaptation must have environmental contexts within which to take place. We believe research adaptation that operates within a context of knowledge of institutional organization, school climate, teacher needs, knowledge of teaching styles and student characteristics, and knowledge of community expectations has optimal chances to succeed and to have success measurable in terms of student achievement.

The Portsmouth Teacher Corps project offers integrated preservice and inservice education within a research based framework for the junior high school teaching staff, Teacher Corps interns, parents, community volunteers, and classroom aides. A variety of field based training options is offered to these project constituencies. While many training options are available, training has focused upon four major thrusts organized into program components which respond to concerns identified through the project's needs as-

sessment.

A basic operating principle of our project is that potential users and adapters of research will use research more readily when they participate in deciding what research findings and strategies will be used and how they will be used. The successful adaptation of research findings hinges on this fundamental principle that those people to be most affected by planned change and innovation must participate in all the decisions which will affect them.

Introducing Adaptation

To translate this principle into action, to maximize individual staff development, and to facilitate the systematic adaptation of research findings by teachers, the project implemented a modification of the Concerns Based Adoption Model (CBAM) developed at the Research and Development Center for Teacher Education at the University of Texas. The CBAM model has two key dimensions. The first of these dimensions is the Stages of Concern About the Innovative Strategies. It is hypothesized that as teachers consider the use of innovative strategies they will have more self-concerns, concerns about how the use of the innovative strategies will affect their status, time, and job performance. As use of the strategies begins, teachers have more task concerns, concerns about how to manage and use the strategies. Once many of these task oriented concerns are resolved, the teacher is able to have more impact concerns, concerns which focus on improving the use of the strategies to increase their impact on students.

The second and equally important dimension of the Concerns-Based Adoption Model is the actual behavior of teachers as they adopt innovative strategies. This dimension, the Level of Use of the Innovative Strategies, also is a developmental sequence which begins as teachers prepare for and

begin use of the strategies and ends when the teacher has developed the skills needed for effective use of the strategies may begin to seek alternatives. The steps in this sequence are Orientation and Preparation for Use, Initial (Mechanical) Use, Routine Use, Refinement of Use, Integration of Use, and Renewal (Seeking Alternatives).

The CBAM model concentrates on individual teacher concerns as a first step in the change process and offers a valuable framework for facilitating teacher adaptation of research findings. Within the six month planning period required of all 12th cycle Teacher Corps projects, we implemented the first steps of the CBAM model through two on-site planning courses. One course entitled "Introduction to A Teacher Corps Model: Systematic Adaptation of Research Findings" carried four graduate credits and was designed to introduce teachers to the major concepts and strategies of Teacher Corps, provide mini-learning experiences and dialogue in the areas of critical concern to Teacher Corps (exceptional child, multicultural concerns, individualization, community involvement, etc.). Besides acting as a formal and regular forum for collaborative planning, the course also provided teachers with learning experiences in methods of classroom adaptation of research findings and the opportunity for teachers to discuss their personal and group concerns about innovation.

The companion on-site planning course, "Needs Assessment Design" which also carried four graduate credits, was a practicum which combined general theoretical inquiry into assessment; skill development in instrument building, decision making, administration, and data analysis with actual implementation in the junior high school. The teachers, while carrying out the needs assessment, learned concepts and practiced skills which would enable them to continue and renew the needs assessment process after the project terminates.

In the final stages of these two courses the teaching staff, in collaboration with project personnel, identified four major thrusts for inservice work and research adaptation: Mainstreaming and the Exceptional Child, Reading and Writing, Individualization, and Psychological Education. The teachers' identification of these four broad areas for research adaptation naturally led to questions about the process of research adaptation. How were research findings in these major areas to be adaptated? What models of research adaptation would we use?

Models for Adapting Research Findings

In her review of Research Cluster Teacher Corps projects in the United States, Greta Morine-Dershimer (1978) identified three basic orientations to research adaptation: the research orientation, the adaptive orientation, and the school problem orientation.

Projects that typified the research orientation tended to identify sound research that seemed to be related to rather general or widespread school problems. The expectation was that this research would be readily adaptable to the specific school site at which the project was based. Teachers at the participating project schools agreed to become involved in training based on a particular area of research but they did not have any input into the original base. Research orientation projects tended to select a single concept or a narrow base of research to be applied. They also tended to identify questions for further study that would expand the knowledge base in the area of research they had selected for application.

Projects that typified the school problem orientation began by working with teachers at a local school site to identify the specific needs and concerns at that site. A search was then made to identify research that might provide solutions responsive to those needs. These projects chose

to demonstrate the process of research adaptation rather than to demonstrate the effectiveness of adapting a specific line of research. School problem orientation projects selected a wide range of research to be applied. The expectation was that a variety of problems existed and that a variety of research would be required to make a real impact on these problems. School problem orientation projects identified questions for further study that stemmed directly from the concerns of teachers at the local site.

The adaptive orientation occupied a more middle ground between the research orientation and school problem orientation and stressed the importance of adaptation as the key learning experience. Project documentation and formative evaluation characterized the approach to continued research with projects developing information systems and instrumentation to assess teacher reaction to training processes and to document adaptation.

Our project exhibits a schizophrenic quality showing tendencies to display elements of all three orientations to adaption. The history of the UNH-Portsmouth Teacher Corps project reveals that the project began and could be characterized in its first year of operation as having more of a research orientation to adaption. However, as the project has matured, a school problem orientation has clearly emerged. We have moved from a linear model of straight line adaption to a serendipitous, ad hoc, responsive model based on emerging and changing teacher needs. An analysis of our project suggests that we have used four strategies for facilitating the adaptation of research: linear systematic sustained adaptation, ad hoc school problem adaptation, case study process adaptation, and information inundations.

Linear Systematic Sustained Adaptation

The best example of the strategy of linear systematic sustained adaptation is found in the on-going work of one of our colleagues, Professor Sharon Oja - a faculty member at the University of New Hampshire. Oja began her work with twenty-one teachers in February, 1978 when she offered a four credit graduate level course in Advanced Human Development in response to the needs assessment data which called for inservice instruction and research adaptation in Psychological Education. The course was taught on site at Portsmouth Junior High School and focused on a cognitive-developmental approach to the interaction of early adolescents and their teachers at the junior high school.

The course provided a blend of action and reflection in the following ways:

(1) The theory and research related to cognitive-developmental stage models and the Mosher-Sprinthall Deliberate Psychological Education Teaching Model as they related to Junior High students and teachers was presented through readings, discussions, and lectures.

(2) Activities in which the teachers themselves participated included a pot pourri of the skills of Deliberate Psychological Education including role plays, dilemma discussions, active listening, and empathic responding.

(3) Teachers kept journals of their reactions, thoughts and feelings related to course content and process; and through written dialogue with the instructor, teachers were given supportive comments and were asked to further extend their analysis and evaluation skills.

(4) Teachers were asked to apply their learnings by trying out the newer role of teacher as a "psychological educator" in the classroom. They were asked to write mini units aimed at their students' levels of personal/moral/conceptual development; some teachers wrote units which helped them determine their students developmental levels, while other teachers attempted to design activities which would enable their students to advance to higher, more adequate stages of development. The units were often results of teacher-voiced dissatisfactions with classroom behaviors, environments, student-student and student-teacher interactions, and students' learning problems. The units were evaluated by the teachers themselves, their students, and occasionally their colleagues in a formative evaluation format so that through trials, evaluations, and reactions the units would be changed and tried again and again in a repeating fashion.

(5) Nineteen teachers produced video or audio tapes of one of their mini units to share with interested class members. This was an additional way for teachers to analyze and evaluate the unit and their own skills in being a psychological educator in the classroom. Sharing their products through video tape also allowed participants the opportunities to learn from the experiences of their colleagues.

(6) In a final project teachers attempted to synthesize their experiences of the semester in either personal or professional terms; some wrote, implemented, and evaluated additional units; some wrote research papers tying developmental theory to certain

classroom practices; some wrote partial autobiographies tying developmental theory to their own experiences of growth; and some teamed to deal with mutual classroom concerns from a developmental stage framework.

(7) All teachers in this course volunteered to participate in evaluation of their own levels of personal and moral development.

During the 1978 Summer Session, a small cadre of eight to ten teachers who had worked with Oja in Spring began to form a research adaptation team. The members of this group were committed to ongoing adaption and development of psychological education concepts and materials and continued collaborating with Oja through the Fall designing, refining, and evaluating instructional units dealing with communication skills. They are now retesting their materials and planning their work for the 1979 Spring semester in which the emphasis will be on peer teaching. The results of this systematic sustained effort is a 200-page publication tentatively titled Volume I - Deliberate Psychological Education - Initial Products, which integrates theory, research findings, and practice. Meetings have been held with the state dissemination office and a plan for disseminating the findings of the teacher research adaptation team has been put into place. In addition, Oja is collecting pre, midpoint, and post test data to measure the personal and social growth of teachers who participated in her first course but did not choose to continue on in the study of psychological education vs a vs those teachers who comprise the research adaptation cadre. Oja is hypothesizing that the teachers who chose to continue a systematic sustained effort in adapting research findings will be affected by the adaptation process and will show more significant gains on measures of ego, moral, and conceptual development than those teachers who moved into other areas of inservice

instruction.

While teachers involved in other aspects of the inservice program have adapted research findings in their individual classrooms, Oja and her teacher research colleagues offer a clear example of a sustained systematic research adaptation model - a continuing and cohesive strand which started with the inservice program and may go on after our Teacher Corps project has terminated.

Ad Hoc School Problem Adaptation

As the project has begun to impact on the school, it has changed the nature and context of the inservice program. Teachers exposed to a variety of training experiences and trying out different approaches to classroom instruction and organization are raising new questions and articulating a new set of needs for the project to respond to. In essence, teachers have moved from self and task concerns to impacts concerns. Experiencing dissonance between what they are doing and what they would like to do, teachers are defining practical problems and initiating their own research to solve these problems. Action research projects have been started by fourteen teachers who are addressing specific problems generated in large part by expanded teacher knowledge and understanding and new skills and attitudes. A sample of the research projects underway includes: the design and implementation of an evaluation process for assessing a teacher's performance in an open classroom; developing behavioral criteria and observation techniques to be used with video tapes for a teacher self evaluation system; the use of the cloze procedure to improve reading in home economics; the design and validation of an eighth grade competency test; the development of a teaching styles inventory; an intensive case study of an exceptional child with a behavioral problem; a study of different approaches to the teaching of writing; measuring the effectiveness of using moral dilemmas to facilitate moral

development among junior high school students; an evaluation of the effectiveness of peer tutoring.

All of the action research studies have the following characteristics:

1. The research projects are teacher initiated responses to teacher identified problems and/or interests.
2. The research projects include literature reviews which focus on research findings that have possible applications for solving the identified problems.
3. The research projects are not locked into any one methodology and include case studies, observational studies, correlational studies, experimental designs, analytical studies, and descriptive studies.
4. The research projects have the potential for generalization of hypotheses and solutions to other teachers' classrooms in the local school site and to classrooms in other junior high schools across the country.

One of our project dissemination goals is to generate a series of publications written by classroom teachers in which they share the designs and results of their action research studies. We believe it is imperative to encourage teachers to write articles and papers about their work. We find ourselves working against an unspoken norm which says "teachers don't publish ___," a norm which emanates from a lack of emphasis on reflective teaching in our schools, a lack of time, and a low collective professional self concept which engenders an ethos of false modesty among teachers. The act of publication is important because it says to teachers your ideas are important, your work is important, and you are important. Furthermore, writing for publication compels reflective and careful thinking about teaching and learn-

ing and helps to build within teachers an image of themselves as researchers.

Jeanne Chall (1975) has observed that 50 years ago educational researchers and teachers collaborated at all levels of the research enterprise. Many of the educational researchers during the 1920s and 1930s were classroom teachers and/or school administrators. Studies in that progressive era were conducted on practical concerns of the teachers and the schools. The collaboration between researchers and practitioners went even further with joint authorship of journal articles, research monographs, and books. Furthermore, they were meant to be and were read not by researchers alone but by practicing classroom teachers. Goodlad and his associates in their book Behind the Classroom Door (1970) suggest that innovations in schools do not generally come about from the usual kind of dissemination of research findings but come only when teachers and administrators seek to find solutions to their own problems. They recommend that research and development should start in a school with the teachers and administrators in that school and not with the university based educational researcher. One of the most important ideas to emerge from our project is that there is a marked need to develop a spirit of and active engagement in participatory research, an idea on which I will elaborate later in this paper.

Case Study Process Adaptation

Our third strategy involves the use of case studies to document the adaptation process and to assess student growth. Measuring student learning and gains in terms of academic achievement and affective growth in relation to the goals and objectives of a specific Teacher Corps project is a paramount concern of any project but particularly a project which focuses on research adaptation. Since the ultimate objective of Teacher Corps Research Cluster projects is to introduce and demonstrate through research adaptation

needed innovation and change to increase the effectiveness of education for low income, special needs, and minority group children, it is obvious that ways need to be formed to determine the degree to which this objective is achieved. What happens to student learning when research validated practices, products, and processes are systematically adapted to bring about organizational, curriculum, and behavioral change? Will students change in their perceptions of self and others? What kinds of attitudinal and behavioral changes will occur among students? What is the relationship between Teacher Corps preservice and inservice instruction for teachers and student cognitive and affective growth?

In the past the experimental method often has been used in an attempt to address these kinds of questions. But the experimental method for evaluating student growth and achievement as outcomes of a Teacher Corps project has two major problems. First, the application of the experimental design requires that experimental and control conditions be held constant throughout the length of the experiment. This means that all students and/or their teachers must receive the same amount of treatment to which they are assigned so that students receiving one type of treatment are not contaminated by the other. If data about differences between students and teachers participating in a Teacher Corps program and students and teachers not participating in the program are to be meaningful, treatments cannot be modified while the experiment is in progress. In accepting the rigorous conditions of the experimental method, one is asked to fit the program to the design rather than vice versa. The use of the experimental method would, then, conflict with the fundamental principle that evaluation should lead to the continual improvement and modification of a Teacher Corps program. Project staff cannot be expected to limit their demonstration efforts and activities to accommodate the constraints of a research design just to guarantee internally valid data. As

project staff members learn about the strengths and weaknesses of their project activities, they may have to change and sometimes radically alter the project in order to meet the needs of the project's constituencies and clients.

A second major weakness of the experimental method is that it yields data about the effectiveness of a project after the fact. Therefore, while it is useful as a judgmental device, it has little value as a decision-making tool. After the fact data are not provided at appropriate times to enable the members of a project staff to determine what their project should be accomplishing or whether it should be altered in the process. Often by the time experimental data have come in, it is too late to make decisions about plans and procedures whose nature often determines the difference between the success and failure of a program to begin with.

In recent years new focus has come to the case study of students as a basis for program evaluation and as a means for investigating the variables involved in students' cognitive and affective growth. Physicians, psychologists, and anthropologists have developed procedures and models for preparing case studies that meet the needs of their professions and which can well serve the needs of the teaching profession. The history of the social sciences is filled with dramatic conceptual "breakthroughs" which have emanated from the use of case study and observational techniques. The ideas of Freud, Piaget, Maslow, Ericson, Jung, Adler, and Rogers are prime examples of profoundly influential ideas which were born and nurtured through the case study approach.

The case study approach differs from more conventional group statistical and experimental approaches in which data on a few variables are gener-

ally summarized across many or all program participants. In the case study approach, data on a large number of variables are organized and presented for only a few participants. Narratives can be prepared describing how a few students work in a program and how they interact with others and what they learned. The differences in approach can provide vastly different information to the research and evaluation audience. Two salient features of the case study are:

1. The student as the unit of analysis. Several students are purposefully or randomly selected to be followed through the program. Information gathered about each individual and his or her activities in the program is eventually reported in a narrative history that describes both the students and the program. These descriptions become the basis for evaluation judgments about student affective and cognitive growth in relationship to program objectives.

2. The variety and richness of data about the individual. The great strength of the case study approach is its ability to describe in a holistic way the program "treatment" and its effects on students; it does not simply focus on narrowly defined outcome variables, but instead it includes much descriptive information. The case study synthesizes vast amounts of information about individuals and about the program and presents it in a form that can be interesting and easily understood. Information sources including background data, test scores, affective measures, self reports, peer reports, staff reports, parent observations, student products, anecdotal data, and evaluator observations are considered essential for the case study. Of special importance is the development of a chronological case history in which data are collected at different points in time. The integration and cross validation of this information adds strength to the final case study

report.

In the University of New Hampshire-Portsmouth Teacher Corps project, interns using the case study approach systematically collect data and document their successes and failures in implementing skills which they have acquired through research validated activities. They test activities in their classrooms and function as action researchers who, in the real world of the classroom, explore, observe, collect, and analyze data, generate questions and refine and modify practice. One of the project's research objectives is the completion of twenty student case studies. Each of these case studies will constitute a historical and chronological description of the affective and cognitive development of each of twenty randomly selected students from a population of special needs, low income, and minority group children along with students from middle class groups. We believe that direct contact and extended observation of the students themselves are necessary to reach conclusions related to project variables involving the academic and affective behaviors of children. Through the case study we not only can look at pre and post test data, but also examine in detail the intervening events, forces, and activities affecting the life of each student and the project interventions and research adaptations which do or do not influence cognitive and affective changes. We think that studies of this kind are needed to investigate the developmental histories of different student populations targeted by Teacher Corps in relation to a particular project's objectives. In a profession where there is a basic commitment to the teaching and understanding of the individual student, it is ironic that research devoted to the full study of single individuals is so rare. The full study of individual students enables teachers and interns to function as researchers, offers the best means for examining the wide range

of contextual and project variables which impinge on student development, and provides a sound base for generating new hypotheses about student learning and growth. The case study is a powerful research methodology for validating the use of research findings and is also an emancipatory research process from which interns and teachers develop increased capacities of analysis which make new educational change actions possible. Finally, the case study allows for ongoing adaptation of research findings and indeed serves as the compass for directing the application of research findings to specific teaching and learning problems. It is in this sense that the case study approach can be regarded as another strategy for research adaptation.

Information Inundation

Our inservice program is voluntary and not mandated, and there are some teachers who have not chosen to participate in our program for a variety of reasons. To facilitate research adaptation and to address teacher concerns among this group of teachers as well as to assist teachers already involved in the inservice program, we have begun to innundate teachers with research findings which are responsive to questions and concerns shared with us in the corridor, the teachers' room, the cafeteria, etc. We have asked university faculty to share papers reporting research which has implications for teacher concerns, the names and addresses of individuals who can provide consultative services to teachers, and descriptions of programs and practices implemented in other schools which may be of interest to teachers. To help university faculty develop informational packets for dissemination to teachers, we have identified through our ongoing informal conversational needs assessment the areas in which research findings are needed. Materials on math anxiety, teaching styles, social

studies, and science teaching methods have been disseminated, and research informational packets are being prepared which speak to such topics as heterogeneous vs homogeneous grouping, public school models of governance, military dependents and transient populations in public schools, programs to help first year teachers, peer-rejected students, child abuse, single parent homes, the effectiveness of homework in improving and increasing student learning, and alternative models for junior high school discipline. Our goals in using this approach are to "scratch and nick" the thinking of uninvolved teachers, to be responsive to all teachers, and to draw individual teachers and small groups of teachers into dialogue, reflection, questioning, and investigation of school problems so that educational change actions will result.

Research Adaption: Synthesis

Research adaptation in the U.N.H.-Portsmouth Teacher Corps project has not been consistent and linear for all teachers. Our program is designed to accommodate different styles and different paces.

We have developed a variety of options for adapting research through inservice education. They include formal university courses after school, released time programs, one to one and small group consultations, independent study, graduate research theses, visitations, professional conferences, team planning meetings, and support for teacher action research and pilot program proposals. Proposals for action research and pilot programs are supported by our project for materials, consultative services, and publication and dissemination. Our approach to research adaption is eclectic allowing for different levels of teacher interest, involvement, and commitment; dialectical in that our daily actions and involvements help us in recasting our theory-in-practice mode of working; responsive to changing people and

situations in the environment of the school; and challenging in that project staff actively engage in dialogue with teachers to question practice and clarify issues.

Speculations and Learnings

Reflecting on our year and a half of project activity, I would like to share with you some tentative speculations or learnings about research adaption and inservice education.

1. Action research is staff development. The processes of adapting research and conducting school problem centered research constitute effective and meaningful inservice education. Inservice education needs to be reconceptualized to recognize that in addition to credit courses, workshops, instructional modules, and professional conferences, important learning and growth occurs when teachers adapt research and carry out research to solve problems that concern them. We have not been successful in implementing research in our schools because by and large research findings have been generated by university or foundation based researchers who have no real connection with the daily life of the schools. The problem of getting teachers involved in research adaption and generation can be addressed if we adopt the model of participatory research as inservice education (Hall, 1977).

   Participatory research focuses on involvement of those who are traditionally "researched" in the identification of problems, the formulation and collection of data, the interpretation of information, and the application of findings to solving problems. Participatory research answers the question of who has the right to create knowledge by arguing that the expected beneficiaries of research should design and carry out their own research.

A research process can be of immediate and direct benefit to a school or school system. It is important that the school and the community gain not only from the results of research, but from the process itself. This means, for example, that teachers, students, and members of the community --- as a result of participating in the research process will be more able to articulate problems themselves and to initiate processes to find solutions. The fundamental principle of participatory research and its point of most radical departure from orthodox research is that the research process should be based on a system of discussion, investigation, and analysis in which the researched are as much a part of the process as the researcher. Theories are neither developed beforehand to be tested nor drawn by the researcher from his or her involvement with reality. Reality is described by the process through which a school, a community, and its teachers, parents, and children develop their own theories and solutions about themselves and their situation (Hall, 1977).

Knowledge is power. A research process which allows for teachers to function as researchers and develops increased capacities of analysis makes new educational change actions possible and helps teachers become more powerful.

2. The school is the best laboratory for research. In one school building there are probably more researchable problems deserving the support and attention of funding agencies than we can imagine. I know of one researcher who has spent three months conducting an anthropological study in one classroom investigating one research problem who reports that a team of researchers could spend a professional lifetime conducting research on innumerable questions inherent in the classroom. Jackson (1968)says

that the classroom teacher typically engages in as many as 1,000 interpersonal exchanges during the course of a six-hour day, frequently averaging 200-300 interpersonal transactions per hour. This observation in itself testifies to the complexity and immediacy of the daily situation in which every teacher is forced to make decisions. A single school is a research goldmine in terms of important questions, variety and richness of data, and numbers of potential researchers. Through inservice education teachers can develop the skills, attitudes, and confidence to function as researchers. One way to encourage teachers to carry out research on their own problems is to support released time so that teachers can reflect on what they do and what they want to do. Another way to encourage teacher research is to publish their work. And still another way is to get teachers to see that research is a form of intellectual inquiry and problem solving and not necessarily a process to be equated with experimental design.

McKenna (1978) observes that teaching becomes the most meaningful and productive when teachers regularly and systematically ask themselves why they do what they do and extend that inquiry to assessing the outcomes of the "what." All too often, if and when teachers do these things, they do them solo - behind closed doors with a classroom full of students to be concerned about at the same time they ask and attempt to answer the profound questions of "Why?," "What," and "To What Ends." There is great promise in the pursuit of inquiry with the collaboration and support of others who have much to contribute to the solution of classroom problems and to the evaluation of the success of instructional practice -- particularly researchers and university faculty. The idea of such collaborative efforts has been discussed by Schaefer in his book,

The School as a Center of Inquiry and was demonstrated in the 1940's by Stephen Corey and others at Teachers College, Columbia University in action research projects which brought together teachers and professors primarily for curriculum development purposes.

Teacher oriented inquiry and the view of the school and the classroom as the places where the research action is will come about when researchers and teachers change their attitudes and perceptions about inquiry and research. McKenna (1978, p.2) speaks clearly to this point:

> "--- many researchers will have to revise their posture that scholars mustn't get their hands dirty with the clay; that the potting must be done by others, once the scholars have prescribed the clay mix and kiln temperature. More specifically, the attitude that you can't learn much in the "messy" situation of the ordinary classroom will need to be replaced with one that accepts real schools as the most appropriate places for conducting research and development. And researchers will need to come to recognize teachers as peers, as colleagues, who have much to contribute to improving the R&D process, from identifying researchable issues, determining research design, data gathering and analysis, to planning programs based on findings. Once these are accomplished, new strategies for conducting research may need to be devised and tested in order to inquire into the multidimensional problems that are identified for study.
>
> Teachers on their part will need to reconceptualize their roles to include involvement in inquiry and problem solving on instructional issues. And they will need to gain confidence in their ability to contribute on a parity basis to the research and development process."

3. There are certain necessary conditions which need to be built into the working environment of the schools if teachers are going to function as researchers:

   3.1 Time needs to be made available as part of the teacher's regular teaching load for discussion, reflection, investigation, and speculation.

   3.2 An atmosphere is required in which teachers have the freedom to identify and initiate their own problems for inquiry, to express

their ideas and develop the ideas into hypotheses, and to share and defend their ideas with administrators and colleagues.

3.3 Technical assistance and support and consulting services ought to be provided when necessary to help teachers (and university faculty) learn field based research processes.

3.4 Reasonable material support for carrying out research and adapting research findings should be available.

3.5 University credit, staff development credit, or inservice credit should be given to teachers for conducting research if they desire it.

3.6 Alternative methodologies for conducting research in the schools need to be encouraged and taught. Ethnomethodological approaches (Mehan and Wood, 1975 and Carini, 1975) and retrospective analyses (Wise, 1977) seem to be very valuable methodologies for conducting research in site specific field based programs.

4. We need to emancipate ourselves from the straight jacket of experimental design and recognize that good research can be conducted in many different ways. Good research requires common sense. With some training in participatory/observational techniques, case study approaches, the use of audio/video taping systems, personal journals, record keeping, and documentation techniques, teachers in partnership with university faculty can bring about a renaissance of school based research which characterized the progressive era in education and contributed major ideas and practices to the education of children.

It is important that university faculty recognize the rich opportunities they have through involvement in field based inservice education programs for generating research and scholarship to meet their institutions'

promotion and tenure requirements. Involvement in field based inservice education is not irreconcilable with qualitative research. Indeed, for the many reasons referred to earlier in this paper the school with all its complexities, problems, and changing dynamics offers the best chances for university faculty to produce significant and lively scholarship. To seize the opportunities available for research in field based inservice education, university faculty may need to learn how to conduct field based research and certainly will need to change their attitudes about the nature and character of research. The question of research and promotion and tenure in relation to field based activity is not a simplistic either-or issue as it all too often has been defined. The question needs to be re-defined. The issue at hand is how vested personal and institutional interests can be merged in field based research to serve all the parties involved in a collaborative inservice education program to improve learning for children.

REFERENCES

Carini, Patricia F. Observation and Description: An Alternative Methodology for the Investigation of Human Phenomena. Grand Forks, North Dakota, University of North Dakota Press, 1975.

Chall, Jeanne. "Restoring Dignity and Self Worth to the Teacher." Phi Delta Kappan, 57, (3), November 1975, 170-174.

Goodlad, John I., Klein, Frances, et. al. Behind the Classroom Door. Worthington, Ohio: Jones Publishing Company, 1970.

Hall, Budd L. "Participatory Research: An Approach for Change." Convergence. 1975, 8, (2) pp. 24-32.

Hall, Budd L. "Creating Knowledge: Breaking the Monopoly." Teacher Corps National Training Conference, 1977.

Jackson, Philip W. Life in Classrooms. New York: Holt, Rinehart, & Winston, 1968.

McKenna, Bernard. "School Based Interactive Research and Development on Teaching: A Promise for More Effective Teaching Profession." Interactive Research and Development on Teaching. Newsletter of Far West Regional Laboratory, California, 1978.

Mehan, Hugh and Wood, Houston. The Reality of Ethnomethodology. New York, John Wiley & Sons, 1975.

Morine, Dershimer, Greta. "Alternative Conceptions of Adapting Research to Teacher Training." A paper presented at the Annual Meeting of the American Educational Research Association, Toronto, 1978.

Oja, Sharon N. "Junior High Teachers' First Attempts in Creating Active Learning Curriculum Units for the Psychological and Moral Development of Their Students." Volume I Deliberate Psychological Education: New Goals for Teachers and Students in Portsmouth Junior High. University of New Hampshire/Portsmouth Teacher Corps Publication, 1979.

Schaefer, Robert J. The School As A Center of Inquiry. New York: Harper & Row, 1967.

Wise, Robert I. "A Case for the Value of Retrospective Accounts of Curriculum Development." A paper presented at the Annual Meeting of the American Educational Research Association, New York, April, 1977.